Produced By:

Commodore International Spare Parts GmbH Braunschweig, West Germany

SYSTEM SCHEMATICS

A600

APRIL, 1992

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INTERNATIONAL EDITION

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Commodore Business Machines, Inc.

1200 Wilson Drive, West Chester, Pennsylvania 19380 U.S.A.

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TABLE OF CONTENTS

| SECTION 1 — SPECIFICATIONS | |
|----------------------------|-----|
| SPECIFICATIONS | |
| SECTION 4 — PARTS | |
| | |
| BOARD LAYOUT | |
| SHIPPING ASSEMBLY | |
| MAIN ASSEMBLY | 4-3 |
| SHIPPING ASSEMBLIES | 4-4 |
| MAJOR ASSEMBLIES | 4-5 |
| PCB COMPONENTS | |
| SECTION 5 — SCHEMATICS | |
| SCHEMATIC #315987, REV. C | |

SPECIFICATIONS

INTRODUCTION

The A600 is a feature enhanced version of the A500 personal computer, in a smaller case with no numeric keypad.

FEATURES

CPU:

7.16MHz 68000 NTSC

7.09 MHz 68000 PAL

MEMORY:

512KB or 1MB internal expandable with additional 1MB external (A601)

KICKSTART ROM:

512K (V2.XX)

MASS STORAGE MEMORY:

Internal, 3.5 inch FDD mounted on the right side.

The A600 HD will contain a 2.5" IDE HDD.

ADDITIONAL FEATURES:

PCMCIA/JEIDA Standard, Memory and I/O card interface.

IDE Hard Drive Interface (2.5" form factor)

Color Composite Video output

RF Audio/Video Output

NEW ADDITIONS

- 1) 8375 FAT AGNUS which supports 2 Meg. of Chip RAM
- 2) 8373 ECS Denise
- 3) Full ECS support
- 4) V2.XX in ROM
- 5) Memory and I/O card interface
- 6) IDE Hard Drive Interface (2.5")
- 7) Color Composite Video Output
- 8) RF Video/Audio Output

CUSTOM CHIPS

The A600 custom chip set has been repackaged in PLCC form for surface mounting application. The A600 will use the 8375 2MB Fat Agnus, the 8373 ECS Denise and the 8364R7 Paula Chip which remains functionally unchanged. Lastly, the A600 will use an enhanced version of the 5719 Gary chip called Gayle, which supports the memory, I/O card interface and the IDE Hard Drive interface.

EXTERNAL SYSTEM I/O

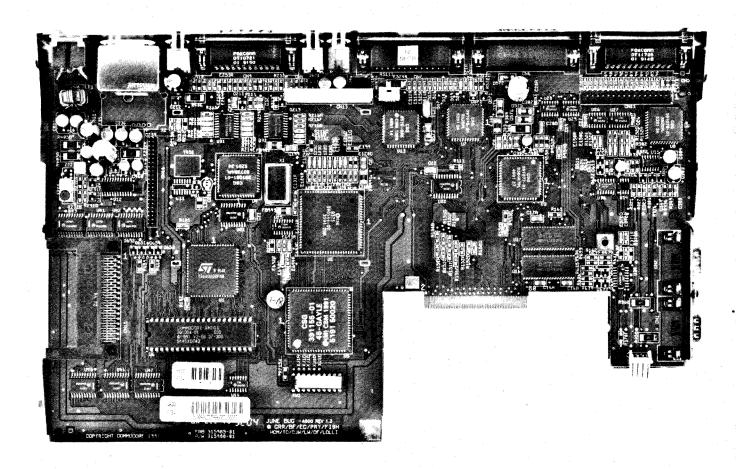
External floppy, Serial, Parallel, Mouse, Joystick, Stereo Audio Ports — these Ports remain unchanged from their A500 counterparts.

PC CARD
PCMCIA SIGNAL DESCRIPTIONS

| 1 | CIA | SIGNAL | , Di | SCRIPT |
|---|-----|-----------|------|------------|
| | No. | Ver. 3 | No. | Ver. 3 |
| | 1 | GND | 35 | GND |
| | 2 | D3 | 36 | CD1 |
| | 2 | D4 | 37 | D11 |
| | 4 | D5 | 38 | D12 |
| | 5 | D6 | 39 | D13 |
| | 6 | D7 | 40 | D14 |
| | 7 | CE1 | 41 | D15 |
| | 8 | A10 | 42 | CE2 |
| | 9 | ŌĒ | 43 | (RFSH) |
| | 10 | A11 | 44 | (OP1) |
| | 11 | A9 | 45 | (OP2) |
| | 12 | A8 | 46 | A17 |
| | 13 | A13 | 47 | A18 |
| | 14 | A14 | 48 | A19 |
| | 15 | WE/PGM | 49 | A20 |
| | 16 | (RDY/BSY) | 50 | A21 |
| | 17 | VCC | 51 | VCC |
| | 18 | VPP1 | 52 | VPP2 |
| | 19 | A16 | 53 | A22 |
| | 20 | A15 | 54 | A23 |
| | 21 | A12 | 55 | RFU |
| | 22 | A7 | 56 | RFU |
| | 23 | A6 | 57 | RFU |
| | 24 | A5 | 58 | RFU |
| | 25 | A4 | 59 | RFU |
| | 26 | A3 | 60 | RFU |
| | 27 | A2 | 61 | (REG) |
| | 28 | A1 | 62 | OP3 |
| | 29 | A0 | 63 | BVD1 |
| | 30 | D0 | 64 | D8 |
| | 31 | D1 | 65 | D9 |
| | 32 | D2 | 66 | <u>D10</u> |
| | 33 | WP | 67 | CD2 |
| | 34 | GND | 68 | GND |

IDE SIGNAL DESCRIPTIONS

| Pin | Signal | Pin | Signal |
|-----|----------------|-----|----------------|
| 1 | - Host reset | 2 | Ground |
| 3 | + Host data 7 | 4 | + Host data 8 |
| 5 | + Host data 6 | 6 | + Host data 9 |
| 7 | + Host data 5 | 8 | + Host data 10 |
| 9 | + Host data 4 | 10 | + Host data 11 |
| 11 | + Host data 3 | 12 | + Host data 12 |
| 13 | + Host data 2 | 14 | + Host data 13 |
| 15 | + Host data 1 | 16 | + Host data 14 |
| 17 | + Host data 0 | 18 | + Host data 15 |
| 19 | Ground Ground | 20 | Key |
| 21 | Reserved | 22 | Ground |
| 23 | – Host Low | 24 | Ground |
| 25 | — Host IOR | 26 | Ground |
| 27 | Reserved | 28 | + Host ALE |
| 29 | Reserved | 30 | Ground |
| 31 | + Host IRQ 14 | 32 | - Host IO 16 |
| 33 | + Host Addr 1 | 34 | - Host PIAG |
| 35 | + Host Addr 0 | 36 | + Host Addr 2 |
| 37 | - Host CS 0 | 38 | - Host CS 1 |
| 39 | - Host SLV/ACT | 40 | Ground |



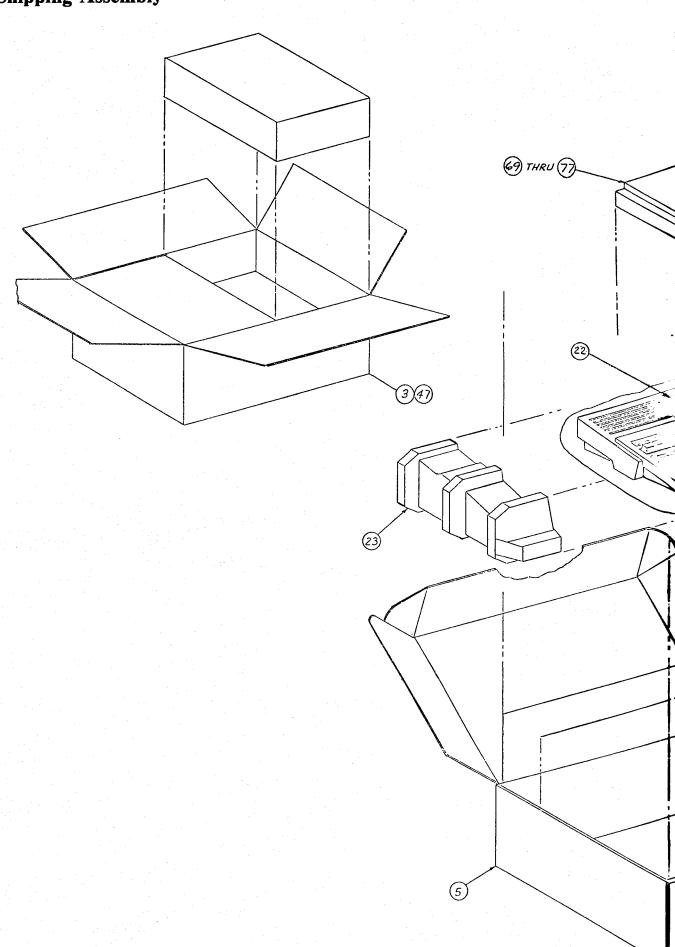
KEY COMPONENTS

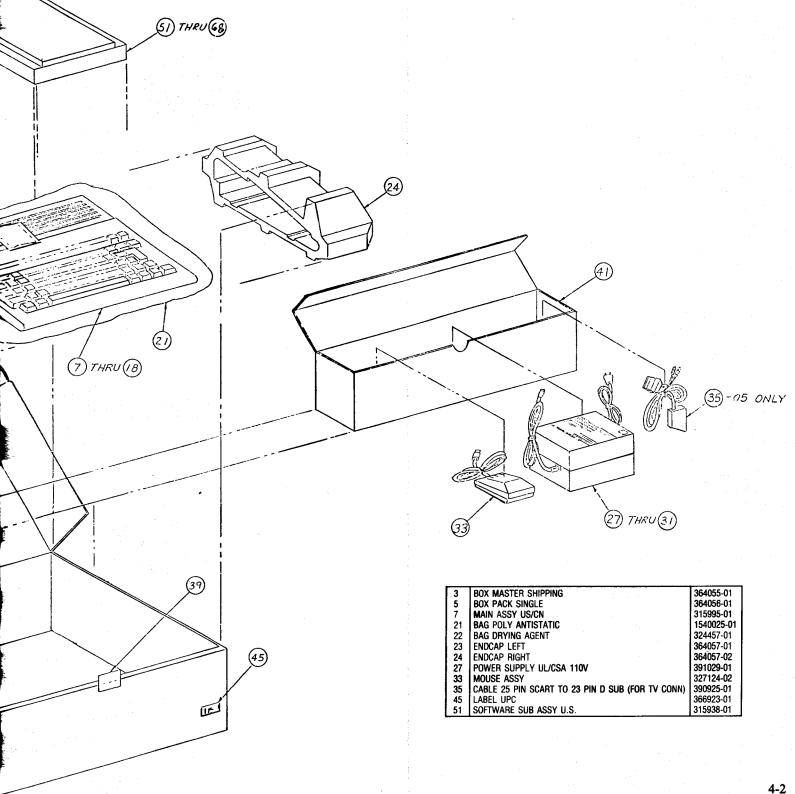
| Ref. | Chip | Description | Part Number |
|--------|---------|-------------------------|---------------------------|
| U1 | 68000 | 68000 Processor 8MHz | 390084-01 |
| U2 | 8375 | ECS Agnus A300/A500 + | 390544-01 |
| U3 | 8364 | Paula | 391077-01 |
| U4 | 8373 | ECS Denise | 391081-01 |
| U5 | 4145-20 | Gayle Gate Array | 391155-01 |
| U6 | ASST | ROM 256Kx16, 200ns | 391304-01 |
| U7-8 | 8520 | Amiga VIA. 1 MHz | 391078-01 |
| U10-11 | 28F10 | Flash Memory 128Kx8 | |
| U12 | CXA1145 | Sony Video Encoder | 391084-01 |
| U13 | 6570-30 | Amiga Keyboard MPU | 391079-01 |
| U14 | NE555 | Reset Timer | 391104-01 |
| U16-17 | ASST | Dram 256Kx16, 120ns | 391105-01 |
| U15 | LF347 | Bimos Op-Amp | 391103-01 |
| 1 | TL084 | Bimos Op-Amp | 391103-01 |
| U28 | 1488 | EIA Line Driver | 39 1087- 01 |
| U29 | 1489 | EIA Line Receiver | 391086-01 |
| X1 | OSC | TTL 28.63636 MHz NTSC | 325566-14 |
| 1 | OSC | TTL 28.37512 MHz PAL | 252344-01 |
| Y451 | XTAL | 4.43619 MHz PAL Burst | 252345-01 |
| Y621 | XTAL | 3 MHz Ceramic Resonator | 391156 -01 |
| X2 | ASST | PAL Video Modulator | 313371-05 |
| | ÁSST | NTSC Video Modulator | 313371-01 |

CONNECTORS

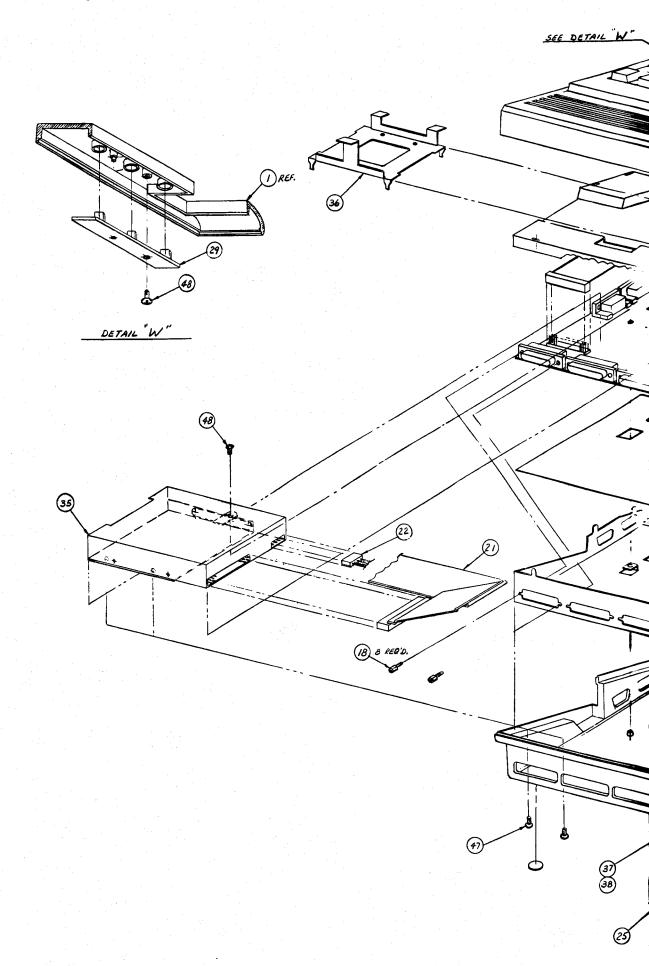
| Ref. | Туре | Description | Part Number |
|------|---------|------------------------|-------------------|
| CN1 | DB9P | Mouse/Joystick 1 | 390242-01 |
| CN2 | DB9P | Mouse/Joystick 2 | 390242-01 |
| CN3 | RCA-J | Right Audio Output | 252122-02 |
| CN4 | RCA-J | Left Audio Output | 252122-01 |
| CN5 | DB23S | External Floppy | 390241- 03 |
| CN6 | DB25P | RS232 Serial Port | |
| CN7 | DB25S | Parallel Printer Port | 390241-05 |
| CN8 | SQ DIN | Power Supply Connector | 252167-01 |
| CN9 | DB23P | Video Output | 390242-03 |
| CN10 | RCA-J | Composite Video | 252122-01 |
| CN11 | DIL-34 | Internal Floppy Signal | 903345-17 |
| CN12 | SIL-4 | Internal Floppy Power | 325516-04 |
| CN13 | MEM-30 | Keyboard Membrane | 390492-02 |
| CN14 | SIL-4 | Internal Floppy Power | |
| CN13 | MEM-30 | Keyboard Membrane | |
| CN14 | SIL-4 | Keyboard Status LED's | 391314-01 |
| CN15 | PCMCIA | PC "Memory Card" | 391073- 01 |
| P9 | EDGE-80 | Memory Bus Expansion | |

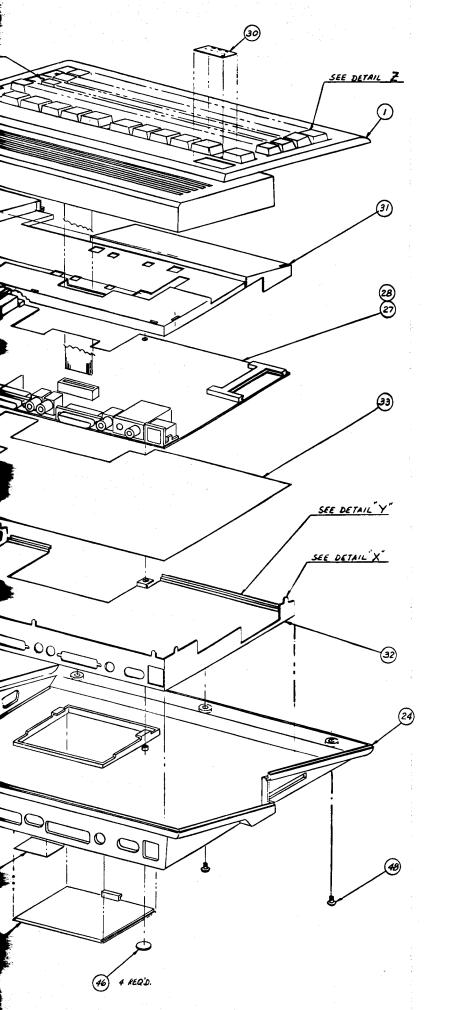
Shipping Assembly

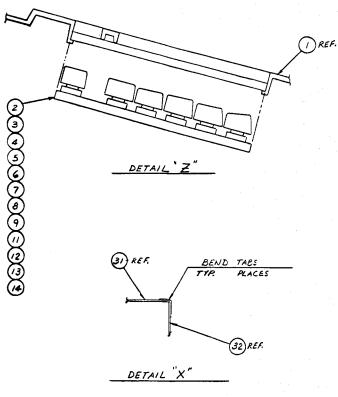


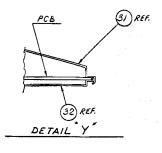


Main Assembly









| 1 | TOP CASE | 363786-01 |
|----|--------------------------------------|-----------|
| 18 | JACKPOST STANDOFF (QTY 8) | 390251-01 |
| 21 | CABLE ASSY FLOPPY DISK DRIVE | 364423-01 |
| 22 | HARNESS DISK POWER ASSY | 327207-02 |
| 24 | BOTTOM CASE | 363787-01 |
| 25 | RAM DOOR | 363899-01 |
| 27 | PCB ASSY NTSC | 315986-01 |
| 28 | PCB ASSY PAL | 315986-02 |
| 29 | LED ASSY | 315992-01 |
| 30 | NAMEPLATE A600 | 363951-01 |
| 31 | TOP SHIELD | 363788-01 |
| 32 | BOTTOM SHIELD | 363789-01 |
| 33 | INSULATION SHEET | 363790-01 |
| 34 | BRACKET SUPPORT FDD | 363795-01 |
| 35 | DRIVE FLOPPY DISK 3.5" | 363914-01 |
| 36 | SUPPORT HARD DISK DRIVE | 363969-01 |
| 37 | LABEL RATING & SERIAL PAL | 366800-01 |
| 38 | LABEL RATING & SERIAL NTSC | 366800-02 |
| 46 | FEET RUBBER WHITE (QTY 4) | 950150-01 |
| 47 | SCREW 3M X 6.0MM MACH PHL PH (QTY 4) | 906800-05 |
| | FASTEN FDD TO BOTTOM CASE | |

Commodore International Spare Parts ListSHIPPING ASSEMBLIES

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| A600 SHIPP | ING ASSY | | NG ASSY (Continued) |
|------------|---|------------|---|
| 530300-01 | U.S. | | POWER SUPPLY BSI 240V |
| 530300-02 | | 391029-03 | POWER SUPPLY VDE 220V |
| 530300-03 | II.K | | POWER SUPPLY SEV 220V |
| | GR | 391029-05 | POWER SUPPLY SAA 220V |
| 530300-05 | FR | 327124-02 | MOUSE ASSY |
| | ir l | 390925-01 | CABLE 25 PIN SCART TO 23 PIN D SUB (FOR TV CONN) |
| 530300-07 | SP I | 364346-01 | BOX ACCESSORY |
| 530300-08 | | | SPACER CARDBOARD |
| 530300-09 | SF | | SPACER CARDBOARD |
| 530300-10 | AU NOT USED | 318143-02 | |
| | NR I | 366923-01 | |
| | SD | 368084-01 | SEAL TAMPER EVIDENT (2 ON SINGLE PACK BOX FLAPS) |
| 530300-13 | FN | | TAPE ADHESIVE TRANSPARENT 50MM |
| | NE I | | SOFTWARE SUB ASSY U.S. |
| 530300-15 | DN | | SOFTWARE SUB ASSY CN |
| 530300-16 | BF | | SOFTWARE SUB ASSY UK |
| 530300-17 | BD | | SOFTWARE SUB ASSY GR |
| 530300-18 | AL | | SOFTWARE SUB ASSY FR |
| 530300-19 | CEL | | SOFTWARE SUB ASSY IT |
| | PG I | | SOFTWARE SUB ASSY SP |
| 364055-01 | BOX MASTER SHIPPING | | SOFTWARE SUB ASSY SG |
| 364056-01 | BOX PACK SINGLE | | SOFTWARE SUB ASSY SF |
| 315995-01 | MAIN ASSY US/CN | | SOFTWARE SUB ASSY NR |
| | MAIN ASSY GR/AU | | SOFTWARE SUB ASSY SD |
| | MAIN ASSY FR/BE | | SOFTWARE SUB ASSY FN |
| | MAIN ASSY SD/FN | | SOFTWARE SUB ASSY NE SOFTWARE SUB ASSY DN |
| 315995-05 | MAIN ASSY SP | | SOFTWARE SUB ASSY BF |
| 315995-06 | MAIN ASSY DN MAIN ASSY SEV MAIN ASSY NR | | SOFTWARE SUB ASSY AL |
| 315995-07 | MAIN ASSY SEV | | MANUAL INTRODUCING THE A600 ENGLISH |
| 315995-08 | MAIN ASSY NR | | MANUAL INTRODUCING THE A600 GERMAN |
| | MAIN ASSY NE | | MANUAL INTRODUCING THE AGOO FRENCH |
| | MAIN ASSY UK/AL | | MANUAL INTRODUCING THE A600 ITALIAN |
| | MAIN ASSY IT | | MANUAL INTRODUCING THE AGOO SPANISH |
| | MAIN ASSY PG | | MANUAL INTRODUCING THE AGOD SPANISH |
| 1540025-01 | BAG POLY ANTISTATIC | | MANUAL INTRODUCING THE ACCO NORWEGIAN MANUAL INTRODUCING THE ACCO SWEDISH |
| | BAG DRYING AGENT | | MANUAL INTRODUCING THE AGOO DUTCH |
| | ENDCAP LEFT | | MANUAL INTRODUCING THE A600 DANISH |
| 364057-02 | ENDCAP RIGHT POWER SUPPLY UL/CSA 110V | 300-7-4-01 | MINIONE MITTODOGING THE 1995 BANKOT |

Commodore International Spare Parts ListA600 MAJOR ASSEMBLIES

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| HUL DE AV | aliable iii ali countiles. | | |
|------------------------|---|-----------|--|
| 315995-01 | MAIN ASSY US/CN | 315986-02 | PCB ASSY PAL |
| | MAIN ASSY GR/AU | 315986-03 | PCB NTSC 1M |
| | MAIN ASSY FR/BE | 315992-01 | |
| 315995-04 | MAIN ASSY SD/FN | | NAMEPLATE A600 |
| 315995-05 | MAIN ASSY SP | | TOP SHIELD |
| | MAIN ASSY DN | | BOTTOM SHIELD |
| 315995-07 | MAIN ASSY SEV | 363790-01 | |
| | MAIN ASSY NR | 363795-01 | |
| 315995-09 | MAIN ASSY NE | | DRIVE FLOPPY DISK 3.5" |
| | MAIN ASSY UK/AL | 363969-01 | SUPPORT HARD DISK DRIVE |
| | MAIN ASSY IT | | LABEL RATING & SERIAL PAL |
| 315995-12 | MAIN ASSY PG | | LABEL RATING & SERIAL NTSC |
| 363786-01 | TOP CASE KEYBOARD ASSY US/CN KEYBOARD ASSY GERMAN KEYBOARD ASSY FRENCH KEYBOARD ASSY SWEDISH/FINNISH KEYBOARD ASSY FINNISH KEYBOARD ASSY DANISH KEYBOARD ASSY SWISS | | LABEL RATING & SERIAL PAL (SUBSTITUTE) |
| 363756-01 | KEYBOARD ASSY US/CN | | LABEL RATING & SERIAL NTSC (SUB) |
| 363756-04 | KEYBOARD ASSY GERMAN | | LABEL RATING & SERIAL PAL (SUB) |
| 363756-05 | KEYBOARD ASSY FRENCH | | LABEL RATING & SERIAL NTSC (SUB) |
| 363756-12 | KEYBOARD ASSY SWEDISH/FINNISH | | LABEL RATING & SERIAL PAL (SUB) |
| 363756-07 | KEYBOARD ASSY FINNISH | | LABEL RATING & SERIAL NTSC (SUB) |
| 363756-15 | KEYBOARD ASSY DANISH | | FEET RUBBER WHITE (QTY 4) SCREW 3M X 6.0MM MACH PHL PH (QTY 4) FASTEN FDD TO BOTTOM |
| 363756-08 | KEYBOARD ASSY SWISS | 906800-05 | CASE |
| 363756-11 | KEYBOARD ASSY NORWEGIAN KEYBOARD ASSY UK/AUSTRALIA | 906883-01 | |
| | KEYBUARD ASSY UKVAUSTRALIA | 900003-01 | BOTTOM CASE |
| 363756-06 | KEYBOARD ASSY ITALIAN | 364075-01 | |
| | KEYBOARD ASSY PORTUGUESE | | LED GREEN |
| | KEYBOARD ASSY BLANK | | LED YELLOW |
| 390251-01 | JACKPOST STANDOFF (GTY 8) JACKPOST STANDOFF (SUB FOR 390251-01) JACKPOST STANDOFF (SUB FOR 390251-01) BOTTOM CASE | | CONNECTOR HOUSING 4 POSITION |
| 390251-03 | JACKPOST STANDOFF (SUB FOR 390251-01) | 391316-01 | |
| 324530-02 363787-01 | DOTTOM CACE | | WIRE AWG #24 BLACK 200MM LG. |
| 363899-01 | RAM DOOR | 903756-02 | |
| 364423-01 | CABLE ASSY FLOPPY DISK DRIVE | 903756-03 | WIRE AWG #24 ORANGE 200MM LG. |
| | HARNESS DISK POWER ASSY | 903756-05 | WIRE AWG #24 GREEN 200MM LG. |
| | PCB ASSY NTSC | 30,00 | , |
| 313900-01 | PUD AGGI NIGU | <u> </u> | <u> </u> |

A601 RAM EXPANSION

| | | | | |
|-----------|------|-----------|----|--|
| 580300-01 | 512K | 580300-02 | 1M | |
| | | | | |

HARD DRIVE ACCESSORIES

| 368712-01 312896-01 | INTRO MANUAL MANUAL USERS HDD ASSY CABLE HDD | II 367826-01 | SCREW (QTY 4) DISK INSTALL 204 NAMEPLATE A600HD |
|------------------------|---|--------------|---|

Commodore International Spare Parts List PCB Components PCB Assembly A600

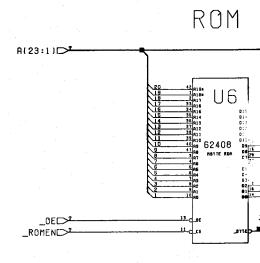
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| HOL DE AVE | ailable in all countries. | | | | |
|-------------------|---------------------------------------|---|------------|-----------------------------|---------------------------|
| IC COMPON | ENTS | | RESISTORS | - 1/8W 5% UNLESS OTHERWISE | SPECIFIED (Continued) |
| 390084-01 | CPU MC68000FN8 8MHZ 68PIN PLCC | U1 | 310026-12 | SM 68 OHM (1206) | E131R,E132R,E251R, |
| 390544-02 | 8375RO AGNUS HR NTSC 84 PIN PLCC | U2 | | , , | E252R,E257R,E261R, |
| 390544-01 | 8375R0 AGNUS HR PAL 84PIN PLCC | U2 | | | E262R,E266R,E267R, |
| | | U5 | | | E351R,E353R-E358R, |
| 391155-01 | 4145R0F020 GAYLE 84PIN PLCC | | | | |
| 391081-01 | 8375R4 DENISE HR 52PIN PLCC | U4 | | | E361R,E363R-E368R, |
| 391077-01 | 8364R7 PAULA 52PIN PLCC | U3 | | | E371R-E374R,E511R- |
| 391 079-01 | 6571R4 KEYBD UP 44PIN PLCC | U13 | | | E523R,E525R,E551R- |
| 391078-01 | 8520R4 CIA 44PIN PLCC 1MHZ | U7,U8 | | | E556R,E558R,E581R- |
| 3911 44-01 | 74HCT244 SM | U31.U32 | 1 | | E596R,E692R-E694R, |
| | 74F00 SM | U26 | | | R151A-R151H,R152A |
| 2011/0.01 | 7/E27 CM | U36 | 310026-29 | SM 75 OHM (1206) | R232E,R234A-R234D |
| 391140-01 | 74F27 SM 74LS74A SM PAL | U33 | 310026-05 | SM 100 OHM (1206) | R237,R622,R639 |
| 391141-01 | 74L574A 5M PAL | | | | |
| 391210-01 | /4ruz 3M | U44 | 310026-24 | SM 120 OHM (1206) | R236,R714A,R714B |
| 391142-01 | 74LS245 SM | U21,U22,U41-U43,U45- | 310026-13 | SM 150 OHM (1206) | R211-R213,R233A-R2330 |
| | + | U47 | 310026-40 | SM 270 OHM (1206) | R214A,R215A,R216A |
| 391085-01 | 74LS157 SM | U34 | 310022-22 | SM 330 OHM (1206) | R214F,R215F,R216F |
| | 74F139 SM | U27 | 310026-14 | SM 360 OHM (1206) | R235,R321,R331 |
| 391099-01 | 74F258 SM | U25 | 310026-15 | SM 390 OHM (1206) | R325,R335 |
| | | 1020 | 310026-21 | SM 470 OHM (1206) | R111,R161,R162,R515, |
| | PAL 16L8B BLANK (WILL BE USED ONLY | | 310020-21 | ON 470 OTHE (1200) | R659,R660,R952,R953A- |
| | TEMPORARILY W/REV 0 GAYLE) | 1 | | | |
| | INTERFACE MC1488D SM | U28 | | | R953C |
| 391086-01 | INTERFACE MC1489D SM | U29 | 310026-11 | SM 820 OHM (1206) | R224 |
| 391103-01 | LINEAR LF347/TL084ACD SM | Í U15 | 310026-07 | SM 1K OHM (1206) | R101,R102,R222,R223, |
| | LINEAR NE555 SM | U14 | | ` ´ | R303,R304,R319,R324, |
| | DRAM 256K X 16 80NS SM | U16,U17 | | | R334,R511D,R103,R512, |
| | ROM KICKSTART V2.0 40PIN DIP | U6 | | | R621,R654,R954A, |
| | | U12 | | | R954B,R231A-R231C, |
| | VIDEO ENCODER CXA1145M SM | 012 | | | R238,R214B,R215B, |
| CONNECTOR | RS | | | | |
| 200241.02 | D SUB 23 PIN FEMALE DB23S | CN5 EXTERNAL FLOPPY | | | R216B (R244) |
| 200040 00 | D SUB 23 PIN MALE DB23P | CN9 RGB VIDEO | | SM 1.5K (1206) | R221 |
| | | | 310026-32 | SM 2K OHM (1206) | R214C,R215C,R216C |
| 390241-05 | D SUB 25 PIN FEMALE DB25S | CN7 PARALLEL PRINTER | 310026-16 | SM 2.7K OHM (1206) | R347,R571 |
| | | PORT | 310026-08 | SM 4.7K OHM (1206) | R251-R253,R348,R632, |
| 390242-01 | D SUB 9 PIN MALE DB9P | CN1,CN2,MOUSE/JOY- | 10,0020 00 | O | R634,R636,R655,R951A- |
| | | STICK | | | 951F,R370A-370H,R651, |
| 252122-01 | RCA JACK YELLOW | CN10,COLOR COM- | | | R719,R514,R715X |
| | · | POSITE VIDEO | | | |
| 252122-01 | RCA JACK WHITE | CN4 LEFT AUDIO | 1 | | (R241) |
| | RCA JACK BLACK | CN3 RIGHT AUDIO | 310026-17 | SM 10K OHM (1206) | R322,R323,R327,R329, |
| | DIN 5 PIN SQUARE | CN8 CPU POWER | | | R332,R333,R337,R339, |
| | | | | | R346,R511A-R511C, |
| 325516-04 | SIL 4PIN HEADER | CN12,FLOPPY | | | R511F,RR511I,R637, |
| | <u> </u> | POWER/LED | | | R572,R623,R631,R633, |
| | DIL 34PIN HEADER W/KEY (PIN3) | CN11 FLOPPY SIGNAL | | • | R635,R652,R653,R656, |
| 3911 53-01 | DIL 44PIN HEADER W/KEY (PIN20) | CN16 HDD | | | R657,R715A-R715H, |
| 391073-01 | 68 PIN RIGHT ANGLE HIGH DENSITY | CN15 CREDIT CARD | | | R716-R718 (R243) |
| | 30 PIN LOCKING ZIF FFC | CN13 KEYBOARD | 1040000 00 | 014 001/ 01/14 /4000) | |
| | HEADER RT ANGLE 4 PIN POLARIZED | CN14 LED | 310026-23 | SM 22K OHM (1206) | R345 |
| | | 10.11.1 = 2.5 | 310026-27 | SM 27K OHM (1206) | R459 |
| | RS AND DIODES | | 310026-18 | | R232A-R232C,R349 |
| 391145-01 | TRANS JFET MPF102/PN4302 SOT23 | Q321,Q331 | 310026-03 | SM 47K OHM (1206) | R612 |
| | TRANS NPN 2N3904 SOT23 | Q211-Q213,Q231-Q233, | 310026-19 | SM 470K OHM (1206) | R326,R336 |
| | | Q511,Q571,Q621,Q622, | 310026-20 | SM 1M 0HM (1206) | R611 |
| | | Q651,Q653,(Q461 PAL) | 310026-09 | SM 10 OHM (1206) | R301,R302 |
| 201120 04 | TDANC DND ONODOC COTOS | | | SM 6.8K OHM (1206) | (R242 FOR PAL) |
| 391122-01 | TRANS PNP 2N3906 SOT23 | Q341,Q631-Q633,Q652, | | | |
| | | Q654 | 310026-41 | CHIP SM 1.8K (1206) | (R245 FOR PAL) |
| | DIODE 1N4148 SOT23 | D571 | 1 | | R246 NTSC |
| | DIODE 1N914 SOT23 (SUB FOR 391129-01) | D571 | 310026-42 | CHIP SM 180 OHM (1206) | (R236 FOR PAL) |
| 391327-01 | DIODE 1N4001 MELF | D572-D576 | 391154-01 | SM 4.02K OHM (1206) 1/8W 1% | R214D,R215D,R216D |
| | - 1/8W 5% UNLESS OTHERWISE SPECIFIED | | 391154-02 | SM 8.06K OHM (1206) 1/8W 1% | R214E,R215E,R216E |
| | | FOOTE FOOTE FOOT | 391154-03 | SM 1K (1206) 1/8W 1% | R214B,R215B,R216B |
| 310026-26 | SM 0 OHM (1206) NTSC JUMPERS | E321R,E331R,R202, | 391154-04 | SM 2K (1206) 1/8W 1% | R214C,R215C,R216C |
| l | • | R225,(R624-R626 NOT | 391093-01 | SM 1 OHM (2512) 1W 5% | R309,R405A,R405B |
| | | STUFFED) | | | |
| 310026-26 | SM 0 OHM (1206) PAL JUMPERS | E321R,E331R,R203 | 391093-02 | SM 4.7 OHM (2512) 1W 5% | E232R,R352,R362,R406 |
| | | (R624-R626 NOT | 391093-04 | SM 47 OHM (2512) 1W 5% | E524R |
| l | | STUFFED) | CAPACITOR | S | |
| 310026 10 | SM 27 OHM (1206) | R113,R114,R152B- | 390818-03 | SM NPO 15PF (1206) | (C242 PAL) |
| 310026-10 | SM 27 OHM (1206) | | | | E258C-E260C,E-692C, |
| l | | R152H,E112R,E120R- | 390818-04 | SM NPO 47PF (1206) | |
| | | E129R,E150R | 1 | | E693C,E150C,E151-E154, |
| | | | 1 | | |
| 310026-01 | SM 47 OHM (1206) | E253R-E256R,E577R, E561R,E562R,E524R | 390818-05 | SM NPO 56PF (1206) | E694C C245, (C241 PAL) |

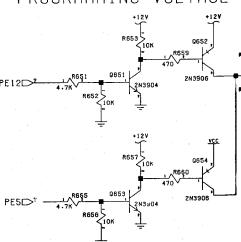
Commodore International Spare Parts List PCB Components (Continued) PCB Assembly A600

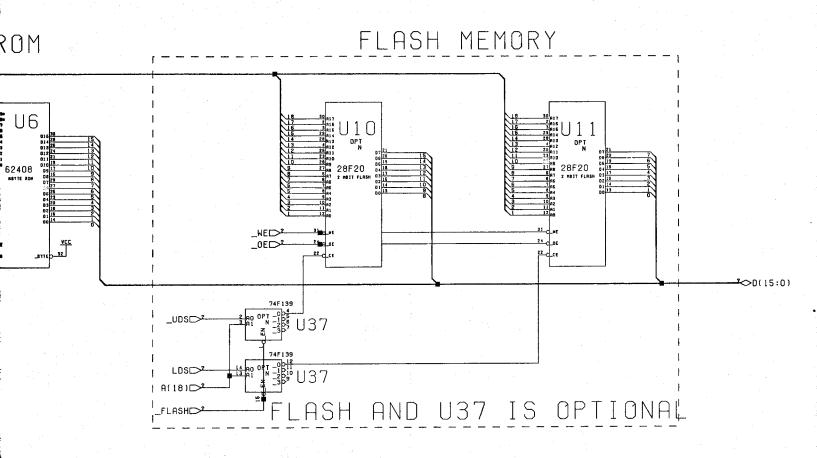
| CAPACITOR | S (Continued) | | CAPACITOR | S (Continued) | |
|------------------------|--|--|---|---|--|
| 390818-06 | SM NPO 100PF (1206) | E231C,E251C-E257C, E261C,E262C,E266C, E267C,E511C-E523BC, E525C,E551C,E552C, E558C,E581C-E596C | ľ | SM NPO 22PF (1206) ALUM ELECT 10UF 25V SM (C) ALUM ELECT 22UF 25V SM (D) | E112C,E122C-E129C, C621,C622 C214,C306,C460,C612 C303,C304,C324,C334, C459 |
| | SM X7R 470PF (1206) | E3510,E3530,E3540, E3610,E3630,E3640, E3710-E3740,E5530- E5560 | | ALUM ELECT 47UF 16V SM (D) ALUM ELECT 100UF .63V SM (D) ALUM ELECT 1000UF 10V ALUM ELECT 470UF 16V | C821,C822 C235,C236,C239,C409 C408,C811 C237,C307 |
| 390853-07 | SM X7R 1000PF (1206) | (C243 PAL) | MISCELLAN | IEOUS | |
| 390853-08 390853-09 | SM X7R 3900PF (1206) SM X7R 6800PF (1206) | C323,C333 E321C,E331C,C322,C332, E355C-E358C,E365C- E368C | 391092-01 391092-01 | FILTER CHIP FERRITE BEAD LARGE (1812) FILTER CHIP FERRITE BEAD MEDIUM (1206) | E301,FB991-FB993 E231R,E258R-E260R, E263R-E265R,E597R, |
| 390853-01 | SM X7R .01UF (1206) | C246,C27,C28A, C28B,C29,C33,C34,C36, C349,E597C,E598C,C591, C613,C800-C803,E232C, E263C-E265C,E524C, E557C,E561C,E562C, C592,C7,C8, (C244 PAL) | 391146-02 391147-02 391146-01 391147-01 391138-01 | INDUCTOR SM 1.2UH (1206) | E598R LF 1 Z221 Z222 Z222 Z221 Z222 (L241) Y621 |
| 390853-04 310027-02 | SM X7R .047UF (1206) SM Z5U .1UF (1206) | C311-C314,C352 C221,C222,C362,C611, (C321,C331,NOT STUFFED) | 391156-01 252345-01 325566-14 252344-01 904150-09 | RESONATOR CERAMIC 3.00 MHZ XTAL 4.433619 MHZ OSCILLATOR 28.63636 MHZ NTSC OSCILLATOR 28.37516 MHZ PAL SOCKET 42 PIN DIP | (Y451) X1 (X1) U6 |
| 390797-01 | SM Z5U .33UF (1210) | C12A,C12B,C13,C14, C16A,C16B,C17A,C17B, C1A,C1B,C2-C4,C21, C211-C213,C22,C25, C301,C302,C305,C31, C41-C43,C32,C551,C552, C5A,C5B,C6,C701,C702, C711,C804,C199,C44- C47 | 313371-01 313371-05 366648-01 366649-01 | MODULATOR MDG VA3424 NTSC MODULATOR MDG UD 3626 PAL LABEL BAR CODE BLANK 0.5" X 1.75" LABEL BAR CODE BLANK 0.5" X 1.00" | X2 (X2) |

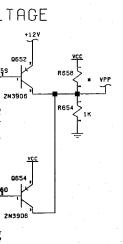
Schematic #315987, Rev. C Sheet 10 of 13

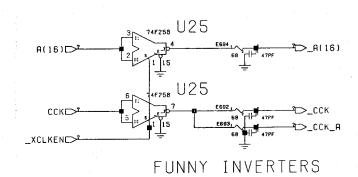


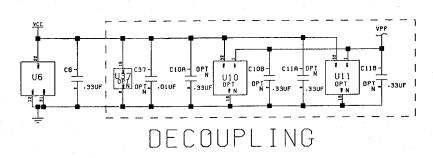
PROGRAMMING VOLTAGE



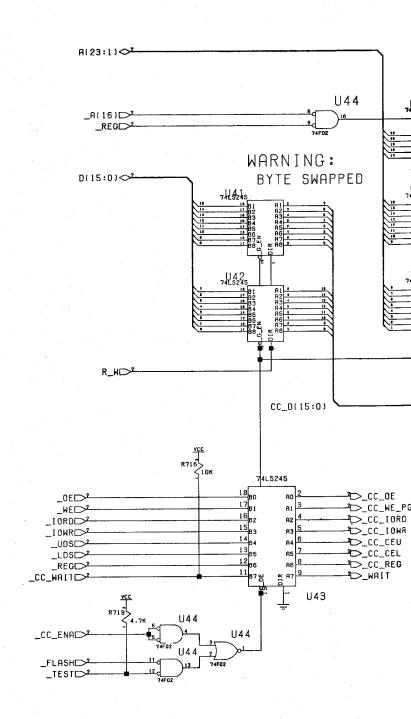


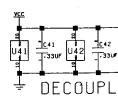


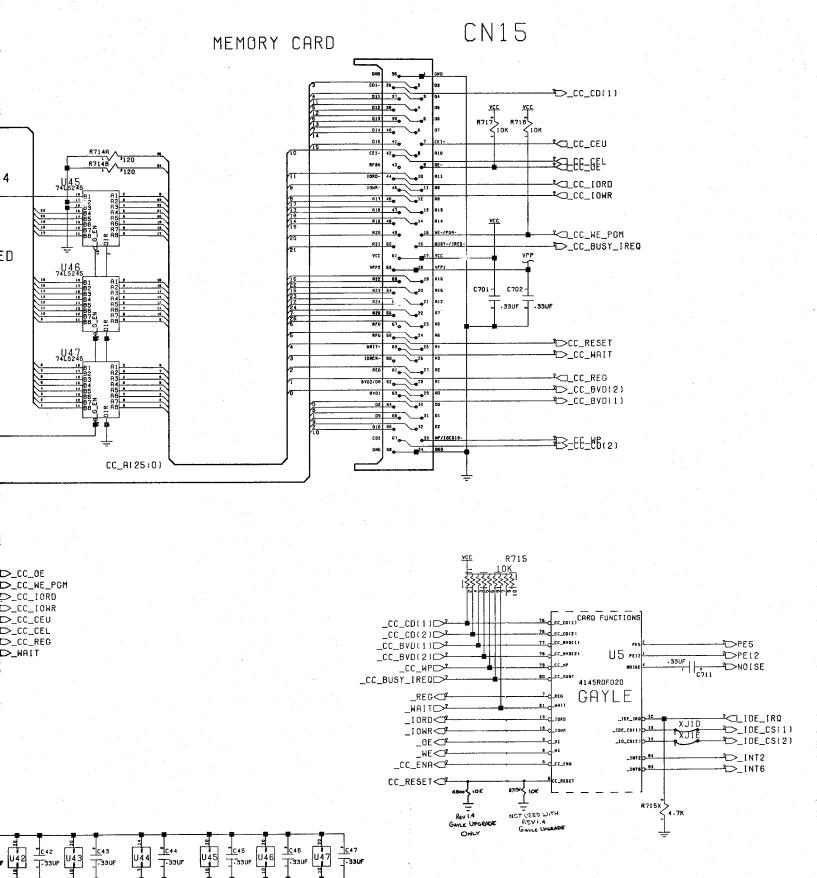




Schematic #315987, Rev. C Sheet 11 of 13

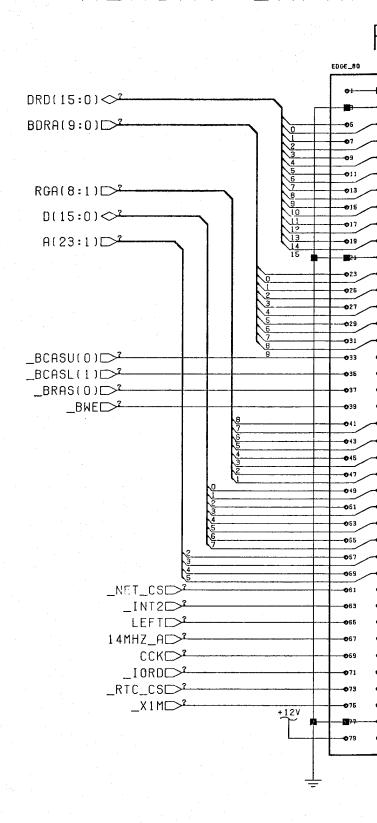






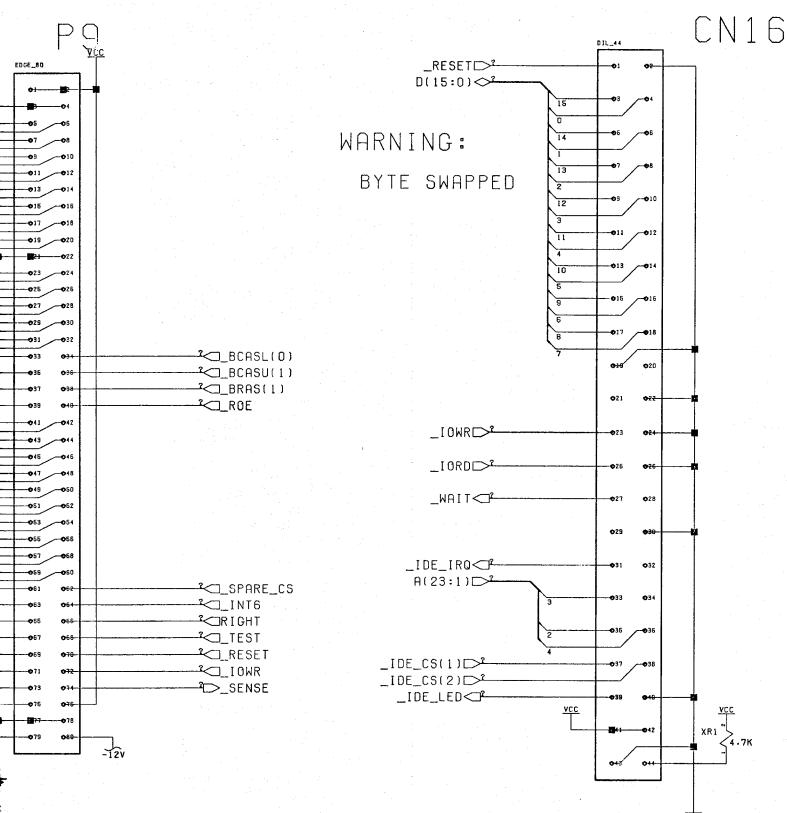
COUPLING

MEMORY EXPANS

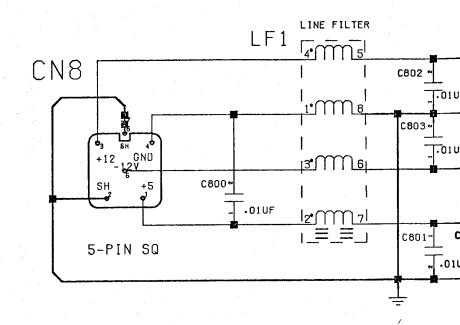


'ANSION

IDE DRIVE

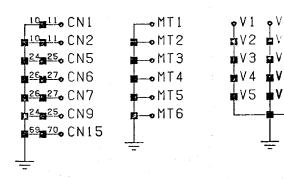


POWER INPU

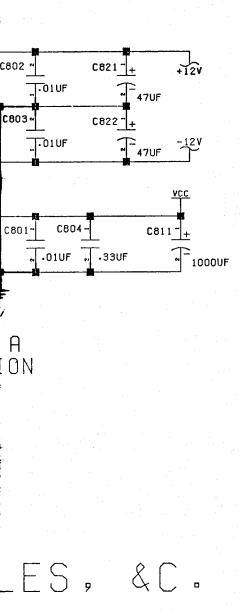


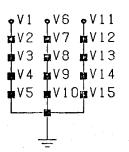
NOTE: HEAVY LINES INDICATE A SINGLE POINT CONNECTION

GROUNDED HOLES

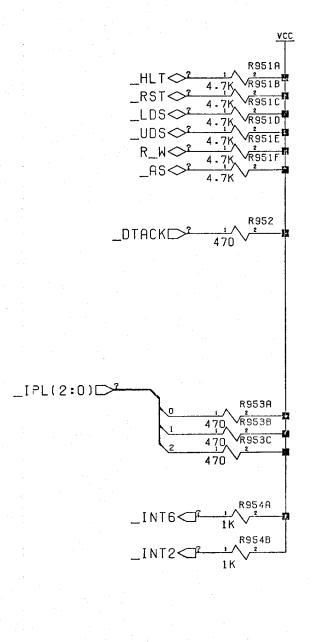


IPUT





"BUS" TERMINATION



Schematic #315987, Rev. C Sheet 1 of 13

JUMPERS AND STUFF

| REF | TYPE | DESCRIPTION | PAGE |
|------------------------------|--------------------------|---|------------------|
| R246 R202 R625 R624 | SMT SMT SMT SMT | NTSC COLOR BURST PAL COLOR BURST KEYBOARD MPU CLOCK KEYBOARD/SYSTEM RESET | 4 4 9 9 |
| | | | |
| | | | |
| | 1, | | |

SIGNAL GLOSSARY

| SIGNAL | DESCRIPTION (AREA) | PAGES |
|--------------------|---|--------------|
| | 28.63636 MHZ MASTER CLOCK | |
| 28MHZ | | |
| 7MHZ | 7.15909 MHZ PROCESSOR CLOCK PROCESSOP ADDRESS BUS (68000) | |
| A[23:1] | DATA ACKIDINEDGE (PARALLEL PORT) | |
| <u> аск</u> | ADDRESS STROBE (68000) | |
| AS | AUDIO INPUT (RS232 PORT) | 1 |
| AUDOUT | AUDIO OUTPUT (RS232 JACK) | |
| BEER | BUS ERROR (68000) | |
| BG | BUS GRANT (68000) | |
| BGACK | BUS GRANT ACKNOWLEDGE (68000) | |
| BLISS | BLITTER SLOWDOWN (CHIPS) | |
| BLIT | CHIP MEMORY ACCESS (CHIPS) | |
| BR | BUS REQUEST (68000) | |
| BUSY | DEVICE BUSY (PARALLEL PORT) | |
| CASL/U | COLUMN ADDRESS STROBE (DRAM) | ļ |
| CCK/CCKQ | COLOR CLOCK / QUADRATURE (CHIPS) | |
| CDAC | 7.15909 MHZ QUADRATURE CLOCK (CHIPS) | |
| CHNG | MEDIA CHANGE (FLOPPY) READ-TIME CLOCK READ / WRITE (RTC) | |
| CLKRD/WR | READ-TIME CLOCK READ / WRITE (RTC) MONOCHROME COMPOSITE VIDEO (VIDEO) | |
| COMP | COMPOSITE SYNC (VIDEO) | |
| CTS | CLEAR TO SEND (RS232 PORT) | |
| D[15:0] | PROCESSOR DATA BUS (68000) | |
| DIR | STEP DIRECTION (FLOPPY) | |
| DKRD | DISK READ DATA (FLOPPY) | |
| DKWD | DISK WRITE DATA (FLOPPY) | I |
| DKWE | DISK WRITE EMABLE (FLOPPY) | |
| DMAL | CHIP DMA REQUEST LINE (CHIPS) | |
| DRA[8:0] | DRAM ADDRESS BUS (DRAM) | |
| DRD[15:0] | DRAM DATA BUS (DRAM) | |
| DSR | DATA SET READY (R\$232 PORT) | |
| DTACK | DATA TRANSFER ACKNOWLEDGE (68000) | |
| DTR | DATA TERMINAL READY (RS232 PORT) | |
| E | PERIPHERAL ENABLE CLOCK (68000) | |
| EXTICK | EM MILES EN SERVICE | |
| FC[2:0] FIREO/1 | FUNCTION CODE (68000) FIRE BUTTON O/1 (JOYSTICKS) | |
| HLT | PROCESSOR HALT (68000) | |
| HSYNC | HORIZONTAL SYNC (VIDEO) | |
| INDEX | INDEX PULSE (FLOPPY) | |
| INT[2,3,6] | INTERRUPT REQUEST (CHIPS) | |
| IORESET | 1/0 RESET | |
| IPL[2:0] | INTERRUPT PRIORITY LEVEL (68000) | |
| KBCLOCK | KEYBOARD CLOCK (KEYBOARD) | |
| KBDATA | KEYBOARD DATA (KEYBOARD) | <u> </u> |
| KBRESET | KEYBOARD RESET (KEYBOARD) | ļ |
| LDS/UDS | UPPER / LOWER DATA STROBES (68000) | |
| LED | POWER ON LED / AUDIO FILTER DISABLE | |
| LEFT/RIGHT | LEFT RIGHT AUDIO (AUDIO) | |
| | | |

CONNECTORS

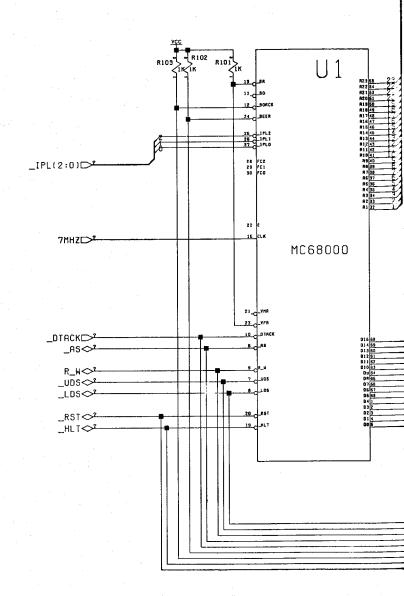
| REF | TYPE | DESCRIPTION | PAGE |
|--------------|-----------------|---|------|
| CN1 | DB9P | MOUSE/JOYSTICK I | 5 |
| CN2 CN3 | DB9P RCA-J | MOUSE/JOYSTICK 2 | Š — |
| CN4 | RCA-J | LEFT AUDIO OUTPUT | 5 |
| CN5 CN6 | DB23S DB25P | EXTERNAL FLOPPY RS232 SERIAL PORT | 7 |
| CN7 CN8 | DB25S | PARALLEL PRINTER PORT | 7 |
| CN9 | DB23P | VIDEO OUTPUT | 6 |
| CN10 | RCA-J | COMPOSITE VIDEO | 8 |
| CN12 | SIL-4 | INTERNAL FLOPPY POWER | 8 |
| CN13 | MEM-30 SII-4 | KEYBOARD MEMBRANE | 9 |
| CNI3 | MEM-30 | KEYBOARD MEMBRANE | 9 |
| CN14 CN15 | SIL-4 PCMCIA | KEYBOARD STATUS LED'S PC "MEMORY CARD" | 11 |
| | EDGE-80 | MEMORY BUS EXPANSION | 12 |
| P9 | IEDGE-01 | TILITORY BOS EXTENSION | ۲, ۲ |

| İSIGNAL | DESCRIPTION (AREA) | PAGES |
|----------------|---|--------------|
| OXOTTILE. | | |
| LPEN | LIGHT PEN TRIGGER (JOYSTICKS) | |
| MTR | MOTOR ON (FLOPPY) | |
| MTRO | MOTOR ON - DRIVE O (FLOPP) | |
| MOV/MOH | MOUSE O QUADRATURE V/H (JC . CKS) | |
| M1V/M1H | MOUSE 1 QUADRATURE V/H (JOYSTICKS) | |
| OVL | OVERLAY ROM OVER RAM | |
| OVR | OVERRIDE SYSTEM DECODING | |
| PIXELSW | GENLOCK PIXEL SWITCH EO) | + |
| POTOX/OY | POT LINES 0 X/Y (JOYS - 5) | |
| POTIX/1Y | POT LINES ! X/Y (JOYS S) | + |
| POUT | PAPER OUT (PARALLEL PO- | |
| PPD[7:0] | THAT STATE OF THE | |
| RAMEN | RAM ENABLE (CHIPS) | + |
| REGEN | | |
| RASO/1 | | |
| RDY RESET | DRIVE READY (FLOPPY) GENERAL RESET | |
| RGA[8:1] | REGISTER ADDRESS BUS (CHIPS) | |
| R/G/B | RED / GREEN / BLUE (VIDEO) | |
| RI | RING INDICATE (RS232 PORT) | |
| ROMEN | ROM ENORIE (ROM) | |
| RIS | REQUEST TO SEND (R\$232 PORT) | |
| RST | PROCESSOR RESET (68000) | |
| RXD | RECEIVE DATA (RS232 PORT) | |
| RW | PROCESSOR READ/WRITE (68000) | |
| SEL | SELECT (PARALLEL PORT) | |
| SEL[3:0] | DRIVE SELECT (FLOPPY) | |
| SIDE | SIDE SELECT (FLOPPY) | |
| STEP | STEP IN/OUT COMMAND (FLOPPY) | |
| TRKO | TRACK ZERO SENSE (FLOPPY) | |
| TXD | TRANSMIT DATA (RS232 PORT) | |
| VMA | VALID MEMORY ADDRESS (68000) | |
| VPA | VALID PERIPHERAL ADDRESS (68000) | |
| VSYNC | VERTICAL SYNC (VIDEO) WRITE ENABLE (DRAM) | |
| WE | WRITE PROTECT SENSE FLOPE | |
| WPROT | EXTERNAL GENLOCK C. (1. 3) | |
| XCLK XCLKEN | EXTERNAL CLOCK ENABLE (VIDES) | <u> </u> |
| XRDY | EXTERNAL DATA READY | |
| VIVDI | CATERIAL DITTI ACTOR | |
| | | |
| | | |
| | ** CREDIT CARD AND IDE STUFF? ** | |
| | | |
| | | |
| | | |
| | | |
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| | <u> </u> | |

KEY COMPONENTS

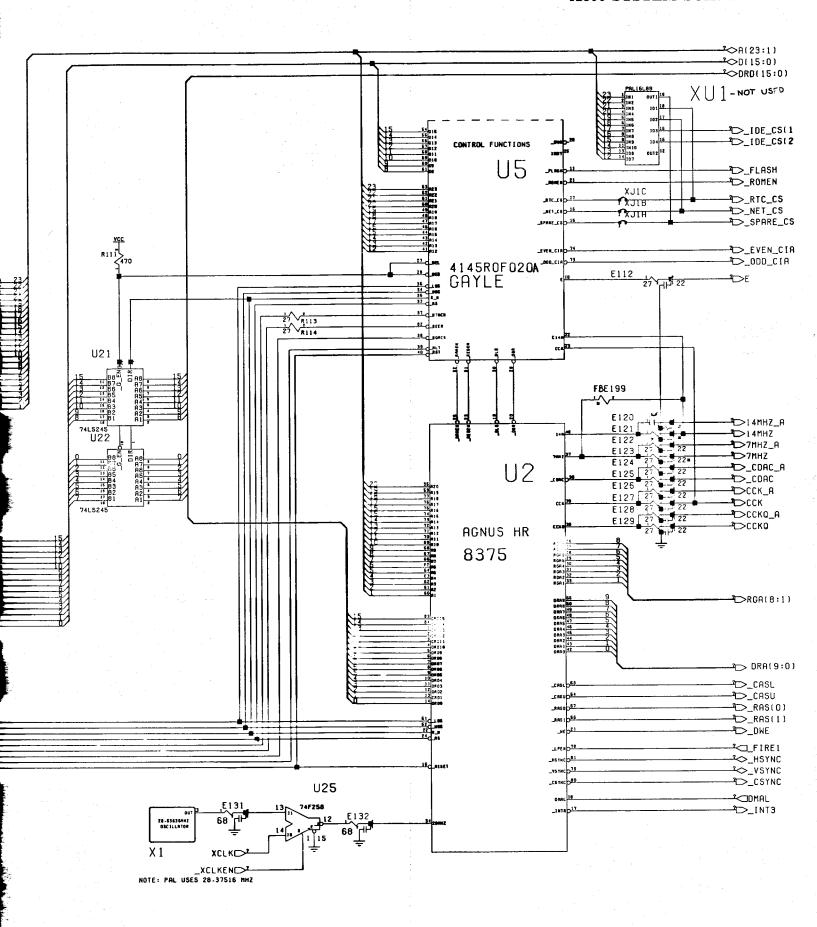
| R:: | CHIP | DESCRIPTION | PAGE |
|---------------|---------------|------------------------|-------------|
| | | | |
| U1 | 68000 | 68000 PROCESSOR, 8MHZ | 2 |
| Ü2 | 8 375_ | ECS AGNUS A300/A500+ | 2 2 5 |
| U3 | 8364 | PAULA | 5 |
| U4 | 8373 | ECS DENISE | 4 |
| | | | |
| US. | 4145-20 | GAYLE GATE ARRAY | 2.8.11 |
| U6 | ASST | ROM 256KX16, 200 NS | 10 |
| U7-8 | 8520 | AMICA VIA. 1 MHZ | 7 |
| U10-11 U12 | 28F10 | FLASH MEMORY 128KX8 | 10 |
| U12 | CXA1145 | SONY VIDEO ENCODER | 4 |
| U13 | 6570-36 | AMGIA KEYBOARD MPU | 9 |
| U14 | NE555_ | RESET TIMER | 9 |
| | | | |
| U16-17 | ASST | DRAM 256KX16, 120 NS | 3 |
| | | | |
| U15 | LF347 | BIMOS OP-AMP | 5 |
| | TL084 | BIMOS OP-AMP | ALT |
| U28 | 1488 | EIA LINE DRIVER | 7 |
| U29 | 1489 | EIA LINE RECEIVER | 7 |
| | | | |
| X1 | OSC | TTL 28.63636 MHZ NTSC | 2 ALT |
| L | OSC | TTL 28.37512 MHZ PAL | |
| Y451 | XTAL | 4.43619MHZ PAL BURST | 4 |
| Y621 | XTAL | 3MHZ CERAMIC RESONATOR | (9 |
| | <u> </u> | | |
| X2 | ASST | PAL VIDEO MODULATOR | 4 |
| | ASST | NTSC VIDEO MODULATOR | 4 |
| | | | ļ <u>-</u> |
| L | | | |
| | | | L |

Schematic #315987, Rev. C Sheet 2 of 13

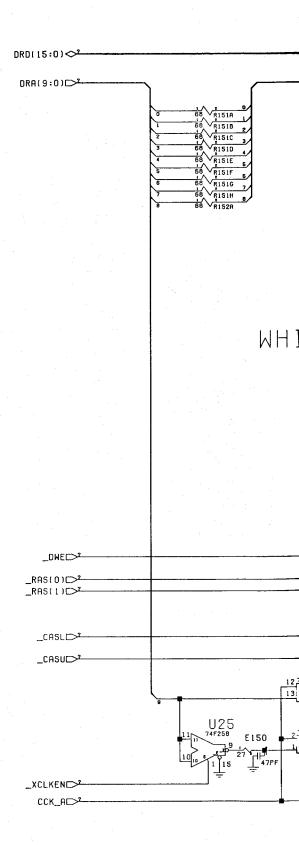


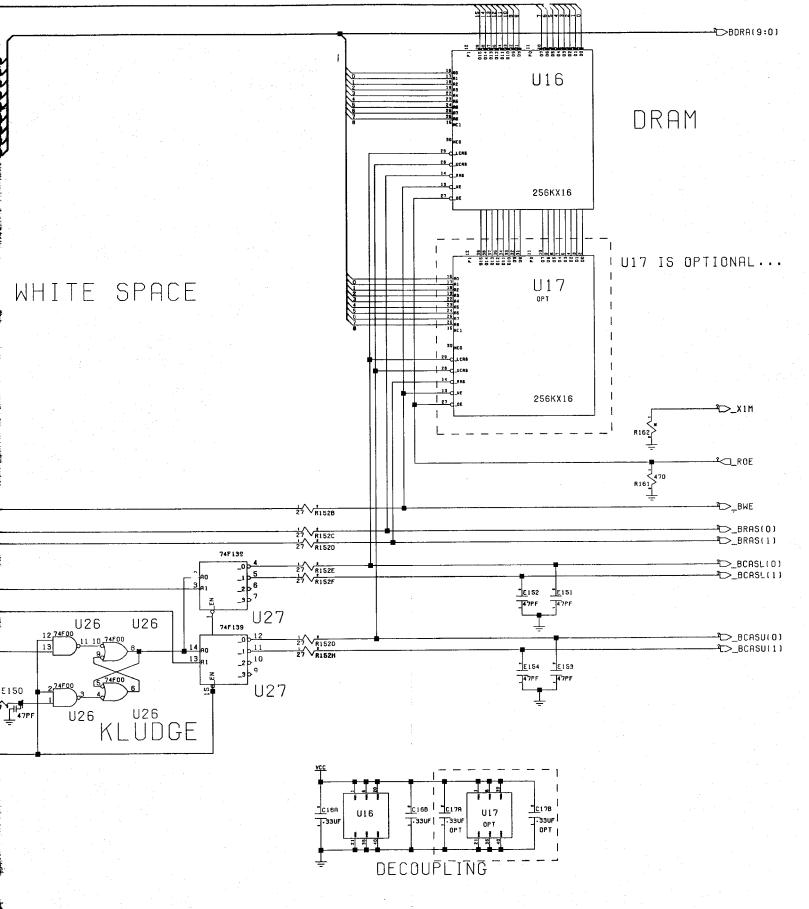
JUNE BUG 10/22/91



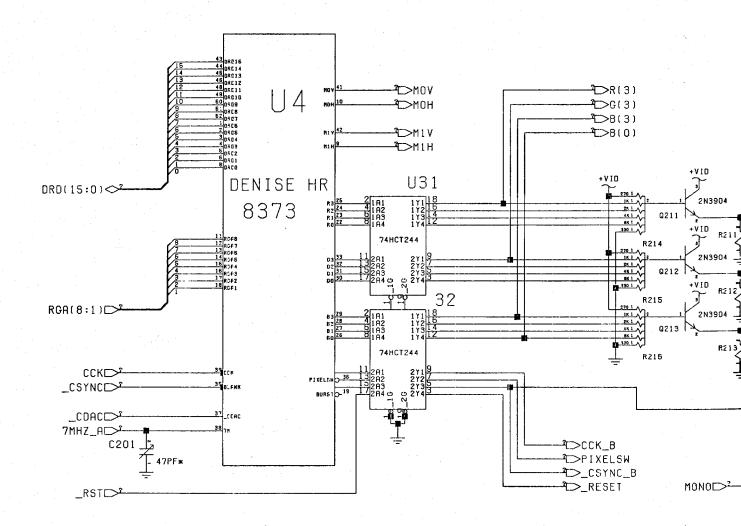


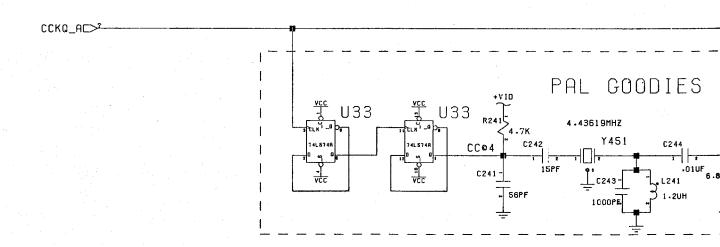
Schematic #315987, Rev. C Sheet 3 of 13

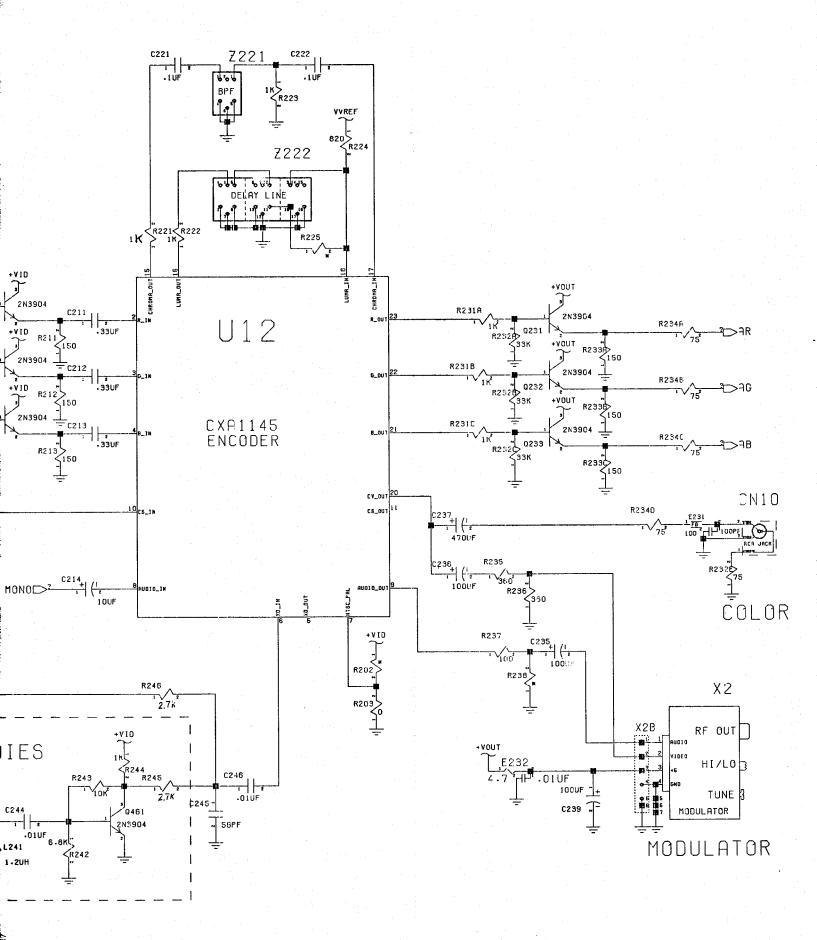


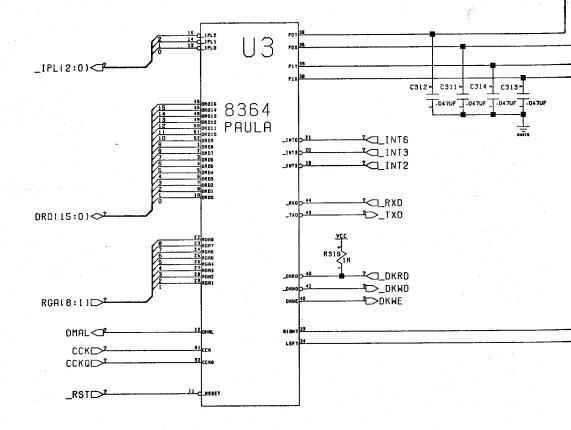


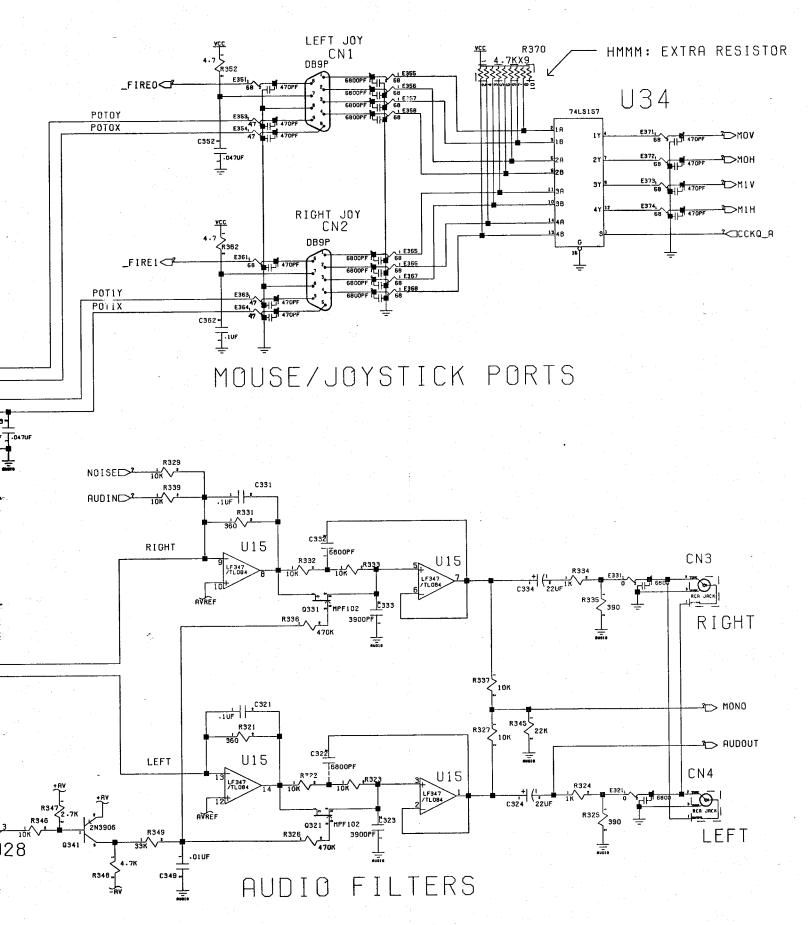
Schematic #315987, Rev. C Sheet 4 of 13



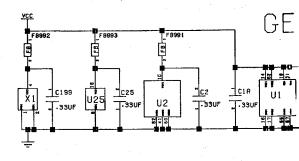


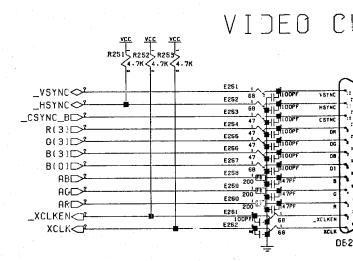




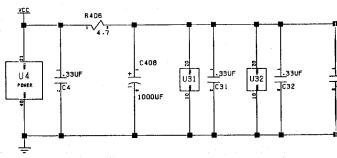


Schematic #315987, Rev. C Sheet 6 of 13

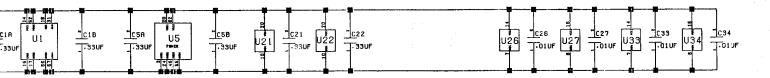




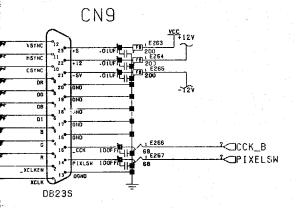
VIDEO POWER

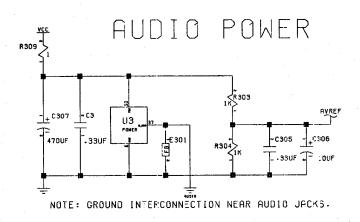


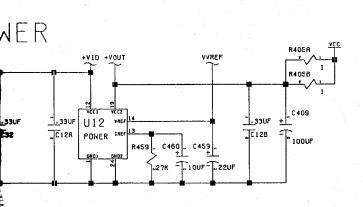
GENERAL DECOUPLING

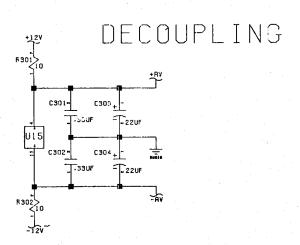


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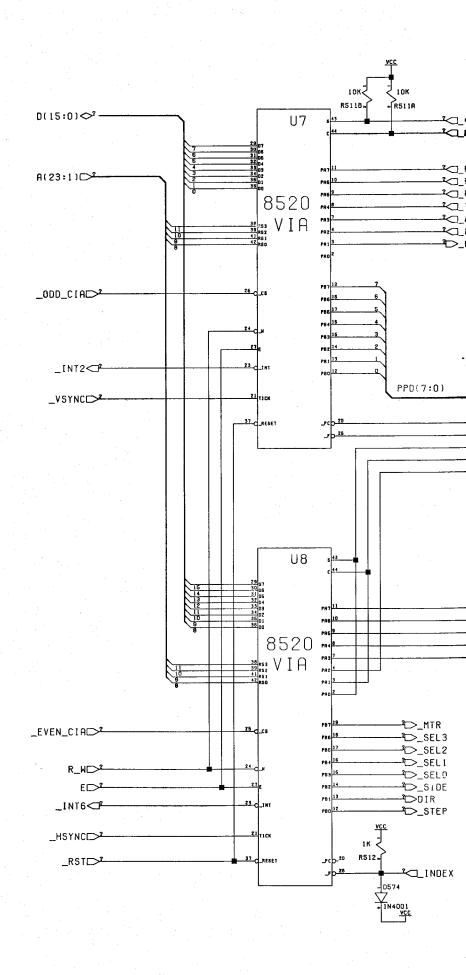


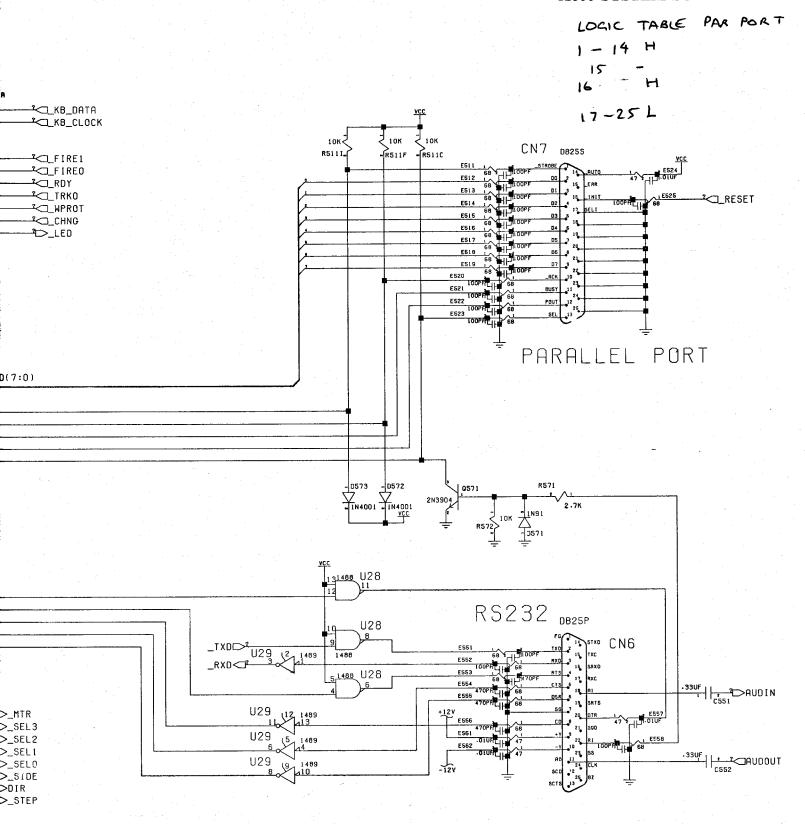






Schematic #315987, Rev. C Sheet 7 of 13

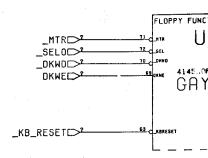




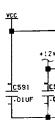
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Schematic #315987, Rev. C Sheet 8 of 13

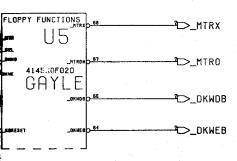
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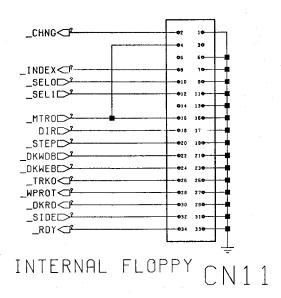


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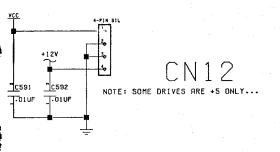


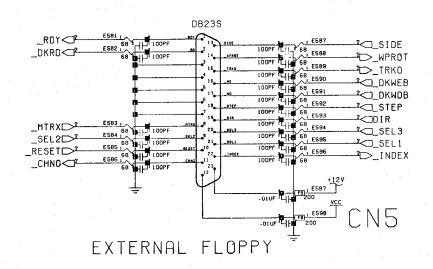
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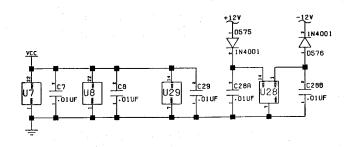




FLOPPY POWER







Schematic #315987, Rev. C Sheet 9 of 13

